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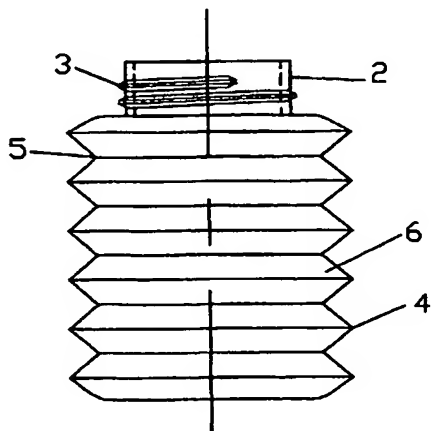
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(54) Title: FLUID DISPENSER



(57) Abstract: A fluid dispenser is extruded from a low density polyethylene material and moulded under pressure to form a body which comprises a bellows closed at one end (1) and including at its other end an upstanding open-ended neck portion (2) formed with external screw threads (3). The bellows comprises a plurality of vertically spaced ring-shaped outer fold-lines and a plurality of vertically spaced inner ring-shaped fold-lines (5) of smaller diameter than that of the outer fold-lines. Each inner ring-shaped fold-line is positioned at a height generally midway between each pair of outer fold-lines, and annular webs (6) extend between neighbouring inner and outer fold-lines. The mean thickness of the webs is between 0.4 and 1.50mm, the height of the dispenser is between 55 and 85mm and the weight of the dispenser is between 10 and 17.5 grams.

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# INTERNATIONAL SEARCH REPORT

Int. Application No  
PCT/GB 03/03717

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 B65D1/32 B65D47/42 B65D51/32 A46B11/00 A45D27/04

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 B65D A46B A45D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 199 57 788 A (SCHOTT GLAS) 5 July 2001 (2001-07-05) claims 1,4,7,8; figure 2 -----	1-5
A	US 4 526 296 A (PARDES GREG ET AL) 2 July 1985 (1985-07-02) the whole document -----	1-5
A	US 3 083 877 A (KENT GASH WILLIAM) 2 April 1963 (1963-04-02) the whole document -----	1-6
A	US 3 833 154 A (MARKOWITZ I) 3 September 1974 (1974-09-03) the whole document -----	1-6

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

17 December 2003

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Name and mailing address of the ISA

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# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/GB 03/03717

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

1-6

### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

International Application No. PCT/GB 03/03717

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-6

A fluid dispenser extruded from a low density polyethylene material and moulded under pressure to form a body comprising a bellows having sufficient flexibility and lightness on one hand, and sufficient rigidity and stability in order to be secured to an applicator.

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2. claims: 7-9

A fluid dispenser including a bellows and having an applicator mounted a cap.

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# INTERNATIONAL SEARCH REPORT

Information on patent family members

Int

I Application No

PCT/GB 03/03717

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
DE 19957788	A	05-07-2001	DE 19957788 A1	05-07-2001
			DE 29923937 U1	05-07-2001
US 4526296	A	02-07-1985	NONE	
US 3083877	A	02-04-1963	NONE	
US 3833154	A	03-09-1974	NONE	